

### Abstract

This invention provides gene-specific probe labeling methods for nucleic acid array detection. In the subject invention, a set of a representational number of distinct gene specific primers is used to generate a sub-population of labeled nucleic acids from each of the different physiological samples. The labeled nucleic acids are then compared to each other by hybridizing to a specially designed nucleic acid array that contains the representational number of distinct genes. The subject methods find use in identifying the expression pattern of the genes of special interest in the physiological samples.